

How painful was it?

Retrospective overestimation of pain in high habitual symptom reporters.

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Background and aims

- ◆ Retrospective symptom ratings play a primary role in health care system.
- ◆ It is commonly assumed that patients are experts in estimating own symptom levels.
- ◆ However, symptom memory is susceptible to various distortions. Overestimation of recalled symptoms is frequently reported.
- ◆ High habitual symptom reporters (HSR) have a tendency to over-report experienced symptoms (Houtveen & Oei, 2007).

We aimed to examine:

- the accuracy of memory for experimentally induced pain
- differences in memory for pain between high and low HSR
- whether memory overestimation increases over time in high HSR

Hypotheses:

- Retrospective pain ratings will be overestimated as compared with average concurrent ratings. This effect will be stronger in high HSR and will increase over time.

Methods

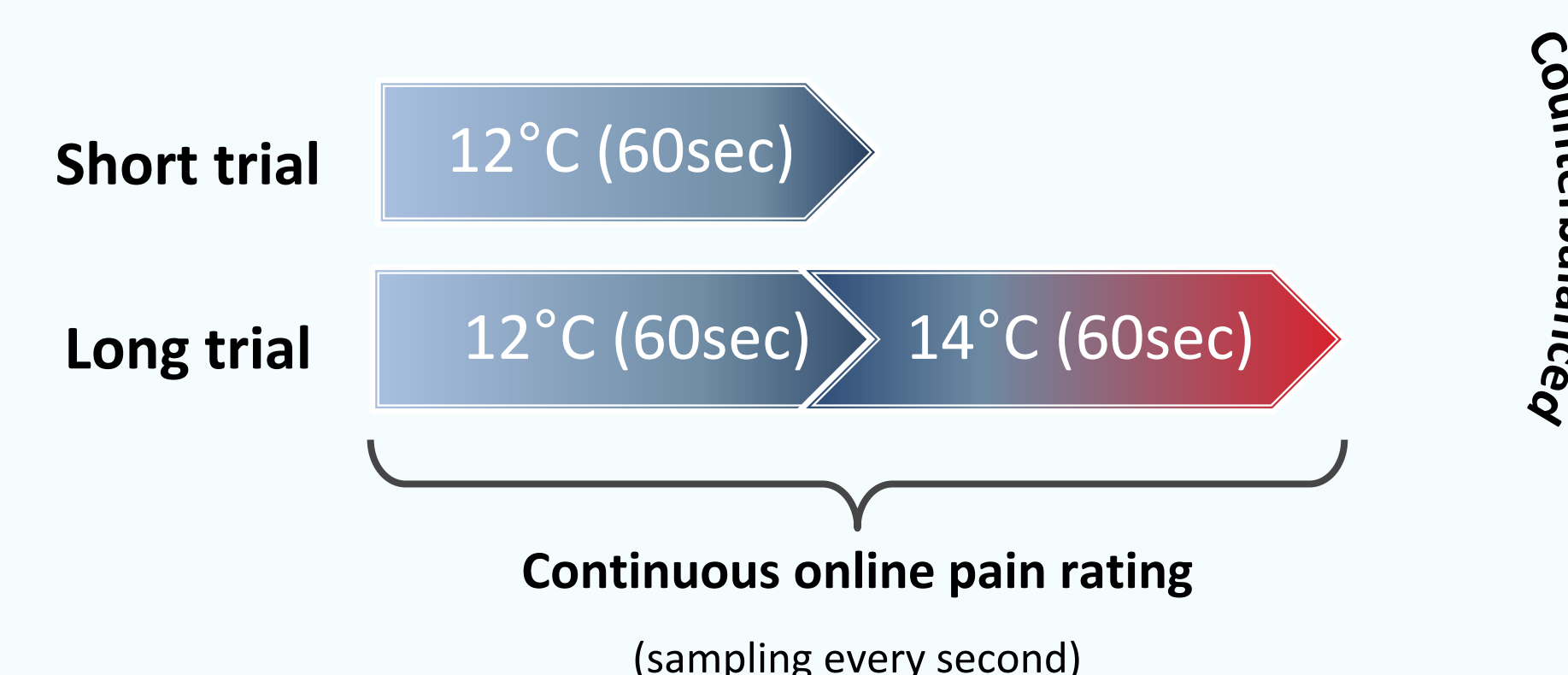
Participants:

31 healthy female students (13 high HSR/18 low HSR) selected via the Checklist for Symptoms in Daily Life (upper and lower quartile)

Procedure:

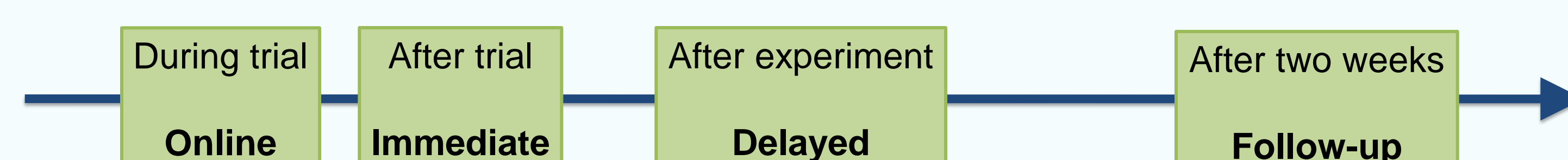
Pain induction with cold pressor task: hand submersion in cold water

Two trials of varying temperature and time (baseline before each trial: 120s in 20,5°C)



Dependent measures:

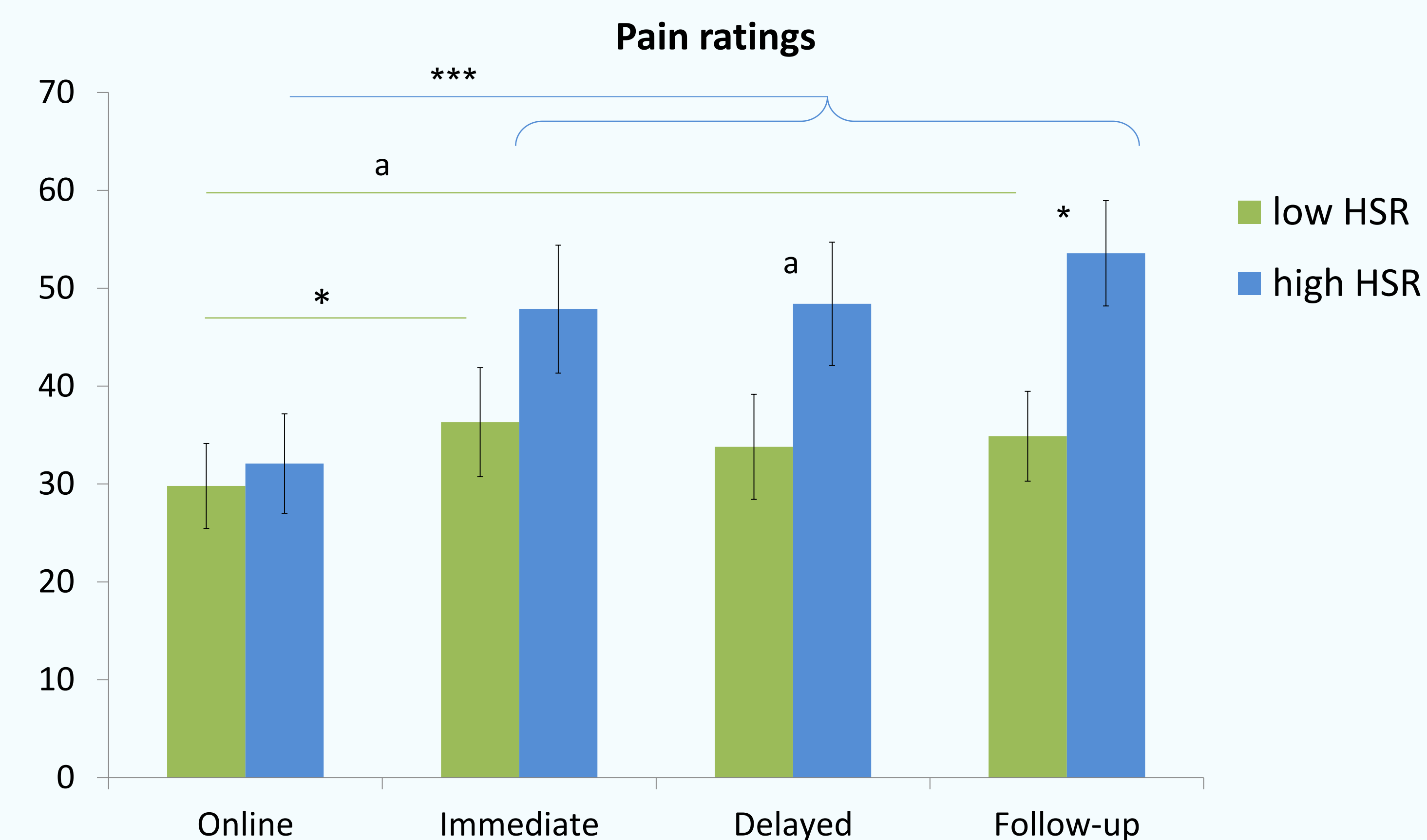
Pain ratings (0-100 visual analogue scale) on four measurement moments



Statistical analysis:

Repeated measures ANOVA: within – Measurement moment (averaged online, immediate, delayed, follow-up), Trial (short/long); between – HSR group (low/high), Order (of trials).

Results



- no differences in averaged online pain ratings during hand immersion between groups

Measurement moment x HSR group interaction, $F(2.4, 64.84) = 6.25$, $p = .002$, $\eta_{partial}^2 = .18$:

- retrospective pain higher than averaged online
- predominantly in high HSR group
- in low HSR group pain ratings also tended to increase over time, but the effect was less pronounced: $F(2.14, 34.23) = 3.01$, $p = .06$, $\eta_{partial}^2 = .16$
- highest difference between the groups appeared in follow-up ratings

Conclusions

- ◆ Retrospective pain ratings are biased in both groups.
- ◆ Overestimation was higher in high HSR group, especially in follow-up ratings, when it reached 67% (17% overestimation in low HSR) as compared with average online ratings.
- ◆ Experienced pain was overestimated already during immediate ratings, showing that distortions in symptom memory may operate promptly.
- ◆ It seems necessary to take into account when symptom ratings are collected and be aware that memory biases influence not only retrospective symptom reporting, but even first global evaluation of an experience.

References

Houtveen, J.H., & Oei, N.Y.L. (2007). Recall bias in reporting medically unexplained symptoms comes from semantic memory. *Journal of Psychosomatic Research*, 62, 277-82.

